Maternity Services

Strategic Workforce and Capacity Planning Meeting

31st July 2018

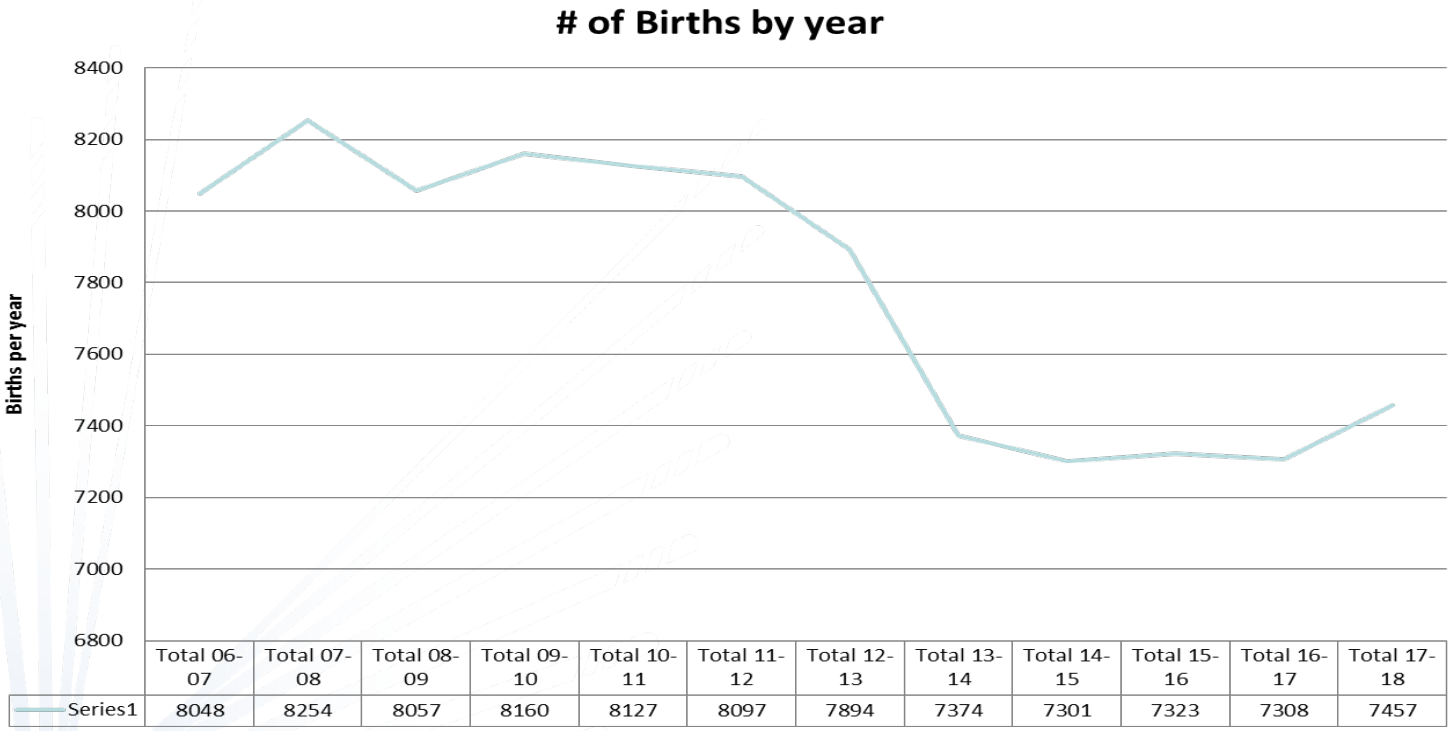
Date:

Created by:

Women's Health
Serious Adverse Events (SAC 1&2)

Year	Number of Cases	Number of Cases with Resource Implications	Description of Resource Concerns
2014/15	5 Maternity cases 1 Gynaecology case	WH_90109 Stillborn baby at full-term	Induction of labour slots were oversubscribed. Non-prioritisation of an urgent induction of labour.
2015/16	3 Maternity cases 1 Gynaecology case	Nil	
2016/17	6 Maternity cases 2 Gynaecology case	WH_106038 Delayed diagnosis of pneumonia leading to neonatal death	High acuity of Birthing and Assessment and maternity wards. Twice the number of induction of labours performed than usual. No escalation plan to manage the high acuity.
2017/18	7 Maternity cases	WH_119098 Inadequate assessment and management of high risk pregnancy resulting in a stillborn baby	Lack of oversight and inadequate continuity of care. Number and complexity of maternity patients coupled with lack of doctors and midwives.
		WH_119042 Breakdown in co-ordination of care resulting in a stillborn baby	Inadequate allocation to a senior doctor for clinical oversight and continuity of care. No triage system on Birthing and Assessment. Limited availability of elective caesarean slots.
		WH_125620 Fall following birth and post epidural analgesia, resulting in a fractured right tibia	Competing priorities with high clinical demand in Maternity Services. Review the optimum number of beds required to provide best practice inpatient care for women.
		WH_127708 Non-assessment of a woman with reduced fetal movements	There was a lack of capacity both in staffing and bed space in Maternity Services to assess Mrs M in a timely manner. There is no formal triage system in Birthing and Assessment.

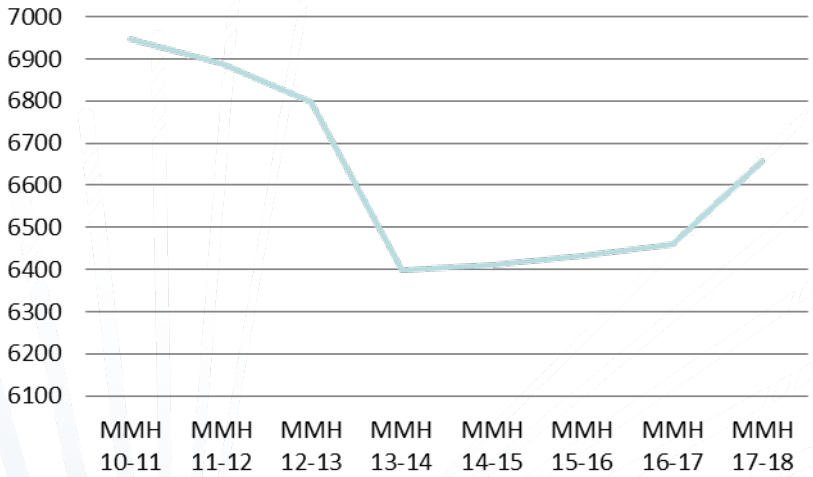
Birth Volumes:



	Total 06-07	Total 07-08	Total 08-09	Total 09-10	Total 10-11	Total 11-12	Total 12-13	Total 13-14	Total 14-15	Total 15-16	Total 16-17	Total 17-18
Series1	8048	8254	8057	8160	8127	8097	7894	7374	7301	7323	7308	7457

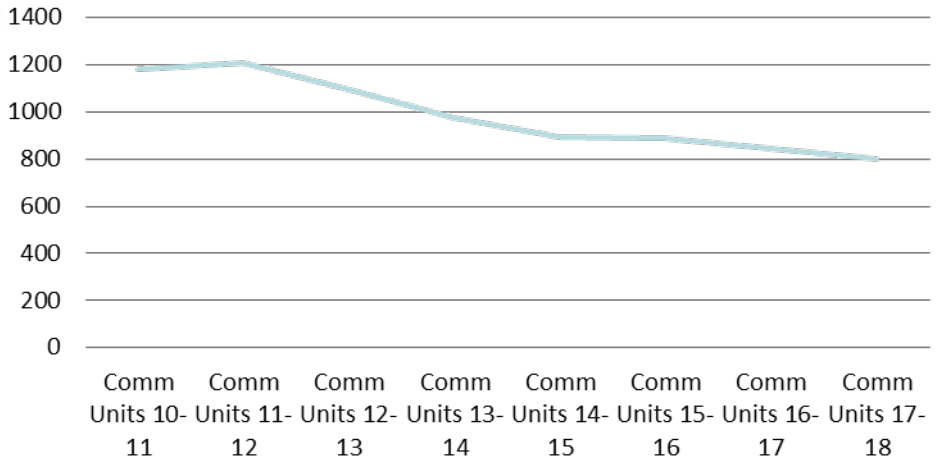
- 17/18 seeing an increase by 2%
- MMH now has18.2 births per day versus 17.7 last year

MMH births



- 3% increase at MMH
- 5% decrease at PBUs

Primary Birthing Unit Births



Current occupancy:

Location	Resourced bed numbers	Number occupied on average 17/18	Average Occupancy 17/18	c/w 16/17
Maternity North	23	18.98	83.23%	79%
Maternity South	22	18.75	85.10%	85%
Botany	12	11.74	97.3%	86%
Papakura	8	7.7	95.57%	86%
Pukekohe	8	5.49	65.85%	67%

Average is taken from 9am/9pm count and includes lodgers (mothers and babies)

Current Situation:

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- B&A Volumes 2017
  - Total number of episodes = 11869, only 1% increase from 2014
  - Antenatal assessments/admissions/discharges = 4536
    - 4.6% increase since 2014
    - increase in average LOS by 30mins
  - LMC percentage at booking across all facilities = 70% however LMC at birth at MMH is 65%. 35% of women requiring primary care by DHB core midwifery services at MMH
  - Time from admission to birth at MMH increased by 3hrs 40mins
  - 7% (450) low risk women birthing at MMH, are domiciles in a PBU locality
  - Average LOS in B&A for women waiting to transfer to Maternity Wards has increased by 20 minutes.
  - Women who meet one or more of the 6 MOH criteria at risk conditions who should receive 72 hours of postnatal care but are discharge with in 48 hours = 703 per annum.
  - 693 women went home directly from B&A after birth (20% with 1 or more high risk factors)

Current situation:

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- Rising complexity (2014 - 2017)
  - No. of unbooked women ↑ 88 to 118
  - Births occurring in theatre ↑ by 18%
  - Induction of labour ↑ by 4 % taking 5 hours longer
  - Epidurals use in B&A ↑ by 4%
  - Caesarean Section rate ↑ by 2% (245 more women)
  - SGA babies have ↑ from 5.6% to 7.6%
  - LGA babies have ↑ from 2.4% to 6.2% of births
  - Babies born <2500g have ↑ from 7.1% to 7.5%
  - Transfers to NNU have ↑ from 7.4% to 9.1%
  - Stillbirth/neonatal deaths have decreased from 2% to 1.9%
  - Diabetes in pregnancy has risen to > 10% of birthing numbers
  - WIES for Women's Health secondary has ↑ by 8% between 15/16 and 16/17 with a further 6% between 16/17 and 17/18

Current situation:

- Pressures on bed capacity
  - Early discharge numbers from B&A = 693 (43% Pacific, 25% Maori, 12% primips, 35% Mangere/Manukau, 58% baby with special needs, most within 8 hours of birth)
  - ALOS of primips women after normal birth is 2.5 days. Post CS = 4.2 days
  - ALOS for women meeting the 6 categories requiring 72 hour target:

    Breastfeeding difficulty = 3.9 days

    Post Operative Recovery = 3.5 days

    Ongoing medical problems = 3.8 days

    Psychological Problems = 3.4 days

    Babies with Special Needs = 4 days

    Geographical Isolation= 2.9 days

  However there are 1171 instances where LOS was < 48 hour (who should have had 72 hours).
  - Maternity Wards Jan to June 2018; 234 babies < 37 weeks gestation on Maternity Wards
  - Specials in B&A average 1 per day, unstable women on Maternity South 1 average per day
  - Oranga Tamariki cases requiring uplift occur every few weeks which have significant emotional stress on woman, whanau and staff
  - Change in practice with implementation of new guidelines impacts on medical, midwifery and radiology resources e.g. SGA, DFM
  - Demographic changes with increase in obesity, diabetes and ethnicity (growing Indian/Asian population)

Current situation:

- Workforce
  - Midwifery/Nursing – budgeted 18/19

39.05	Senior Midwives/Nurses
30.49	Registered/Enrolled Nurses
96.79	Registered Midwives
31.70	Community/Caseloading Midwives
21.93	Health Care Assistants
219.96	**Total**

  - Medical

21.82	SMOs (employed + UOA clinical staff)
5	Fellows (agreed to 5 starting December)
18	Registrars (additional reliever approved for 18/19)
10	House Officers

    24/7 medical staff on-site shared by 16 SMOs
  - Supporting staff

37.54	Clerical
3.0	Community Health Workers
2.84	Breastfeeding advocates

Skill Mix – Core Midwifery Pay scales Steps 1-5

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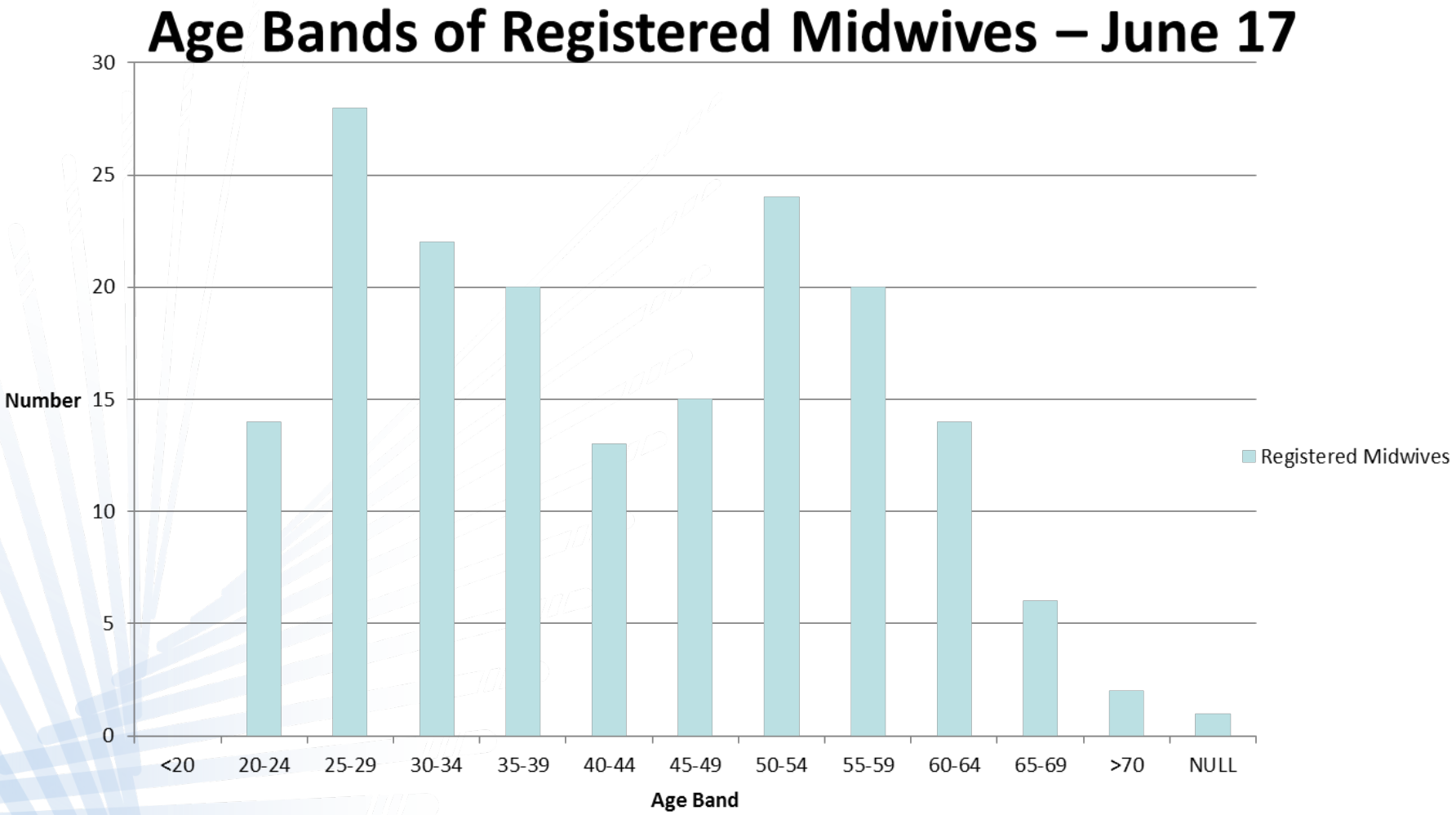
- Birthing and Assessment

Pay Scale Steps	FTE actual	Percentage
1	11.5	32.2 %
2	2.4	6.7 %
3	2.7	7.6 %
4	0	0 %
5	19.1	53.5 %

- Maternity Wards

Pay Scale Steps	FTE actual	Percentage
1	10.3	35.5 %
2	3.8	13.1 %
3	0	0 %
4	0.9	3.1 %
5	14.0	48.3 %

Current situation:



Current situation:

- FTE Total Midwifery resignations and Starters

Year	FTE resigned from employment	FTE commenced employment
15/16	20.6	23.75
16/17	34.3	28.7
17/18	22.35	31.8

15% turn over on average in the past three years

Current situation:

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MERAS Midwifery Safe Staffing Standards (see hand out)

Matching to the recommended MERAS staff staffing standards indicates additional resources required to meet current demand are:

- Birthing and Assessment = 2 per shift (already approved for 18/19 budget)
- Maternity North and South combined = 2.7 per shift on mornings and afternoon, 3.7 at night.
- Botany Birthing Unit = 0.5 for morning shift and 1 additional for night shift

- Midwifery requirements will be compounded by replacement of nursing FTE with midwifery and /or increasing bed capacity. A more detailed analysis of requirements should follow should CM Health agree to adopt the standards.

- Realising the needs to increase FTE through a defined recruitment strategy indicates the approach should be made through a medium to long term strategic plan to reach the advised staffing levels to meet the MERAS standards.

Recent/current initiatives:

- Workforce Pipeline
  - Midwifery Student capacity/partnerships/placements
    - AUT Students (2018 – Year 1 = 125; Year 2 = 90; Year 3 = 70)
    - Otago/Christchurch Students placements
    - MDES
  - Midwifery New Graduate Programme
    - Preceptoring model

    Current new graduate midwifery employment location:

CMH Core:	88	54%
CMH LMC	45	27%
Other DHB	28	17%
Left profession	3	2%

- Midwifery recruitment and retentions
  - Social media, local and international advertising

Recent/current initiatives:

- Nursing workforce support and career pathways
  - Maternity programme for Registered Nurses
  - Professional development in Neonatal Care, Lactation, Gynaecology or Paediatrics
- Medical
  - B&A Medical lead
  - Schedule 10 RMO rosters & registrars and house officers
  - Virtual clinics (VFSAs)
  - Review of model of care at MMH site in and out of hours including separating GP/LMC calls from the acute obstetric SMO duty

Recent/current initiatives:

- Maternity Living our Values project 2017
  - Ward split
  - Environmental changes
  - Clinical Maternity Coordinator role
  - Care pathways
  - Elective Caesarean Section pathway
  - Discharge lounge
- Birthing and Assessment Improvement Project 2018
  - Triaging
  - Communications
  - Induction of labour booking process
  - Roles and responsibilities
  - Model of care

Recent/current initiatives:

- Pending - Obstetric capacity improvement project
  - Grading, day-time telephone calls and virtual consultations
  - Semi-acute clinics at MSC (day assessment unit)
  - Single Maternity Ward SMO for sequential days
  - Additional senior support after-hours
- Maternity Clinical Information System Variation Project 2017/2018
  - Risk Management plans
  - Dual discharge process
  - Standardising documentation
- Primary Birthing Promotion project 2018
- Education Plan
  - Roll out plan for guidelines and changes
  - Career pathways within midwifery

Recent/current initiatives:

- Improvements in current service delivery
  - Diabetes in Pregnancy Service
  - Maternal Fetal Medicine model of care
  - Communication pathways for social concerns (addressing social work pathways)
  - Clerical restructure 2017
  - Escalation plans
  - Baby alerting system
  - Neonatal Observation including NEWS and pulse oximetry
  - BFHI re-assessment October 2018
  - Other organisational changes e.g. Clincial Portal, Fundamentals of Care,

Strategic direction:

- Bed capacity – measuring and defining
  - Future assumptions
    - IOL rate will be 30%
    - CS rate will be 30%
    - Need to meet MOH minimum LOS for 6 categories
    - Outpatient acute capacity will continue to grow
    - Low risk women will be encouraged to birth in local facility
    - Primary Maternity Service (Section 88 & DHB services specifications) model of care will remain
  - Meeting the demands of rising complexity including the need for a Day Assessment Unit
  - Expectation for transitioning babies from NNU
  - Current 45 beds at MMH already short by 5 beds if based on the CM Health 2017 bed model output (Wing Cheuk Chen & Dean Papa)
  - If we include women needing to stay longer as per MOH guidelines, bed requirements calculated a further increase by 6, giving a total of 11 beds required now
  - This excludes an increase in transitional babies from the NNU or women domiciled in C M Health currently birthing at ADHB, repatriating to C M Health facilities

Minimum Bed Model Forecast Requirements

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Source: CM Health 2017 Bed Model Output, Wing Cheuk Chan and Dean Papa
Caveat: Does not include any 'capped bed requirements, e.g. women discharged home directly as this is not recorded in the 'actual bed utilisation' data

			BASELINE	FORECAST Maternity and Womens' Project Requirements based on population growth in 2017 (Minimum)										
Site	**Unit**	Planned Physical in 2013	Physical Capacity 2018	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**
Inpatient	**NNU**	23 cot spaces	38	34	35	35	36	37	38	38	39	39	39	39
Inpatient	**ALBU**	28	27	22	23	23	24	24	25	25	25	25	25	25
Inpatient	**Maternity**	48	45	48	50	51	52	53	54	55	55	56	57	57
Inpatient	**Gynaecology**	NA	15	22	23	23	24	24	25	25	26	26	27	27
Primary	**Botany**	NA	15/4	16	16	16	17	17	17	17	18	18	18	17
Primary	**Papakura**	NA	10/3	10	11	11	12	12	12	12	12	12	12	12
Primary	**Pukekohe**	NA	10/2	10	11	11	11	12	12	12	12	12	12	12

Modelling Notes:

- bed modelling as 20 Oct 2017 on baseline 2016 Sep to 2017 August (refers to 16/17 base year)
- Forecast assumptions demographic only
- As the bed pool becomes bigger, the more we are able to cope with peak demand more efficiently

Does not include some 653 women needing to stay longer under MoH 3 days guideline = 2 beds
Does not include women going home <12 hours of delivery - if all 685 stayed 2 days = 4 beds
Shortfall at MMH therefore for 18/19 5 + 6 = 11 beds
Does not include any further significant increase in current intervention rates (i.e. CS rate above 30%)
OPTIONS:
1.Galbraith level 5 - antenatal (12 beds) + day assessment + Gynae -overflow - by moving antenatal women we create more postnatal capacity on maternity ward
2.Mangere Primary Birthing Facility (currently being built by Wright Foundation) - contract not just for births but 10 - 12 postnatal beds for Mangere/Papatoete/Otahuhu women
3. Combination of 1 and 2

Strategic direction:

- Workforce planning – measure and defining for medical and midwifery
  - Work towards implementing MERAS safe staffing standards
  - Recruit up to the current required medical FTE
  - Review support staff FTE to enable efficiencies
- Growing the workforce in number and skill
  - Continue recruitment/retention initiative both local and international
  - New graduate programme budget regardless of vacancy rate to ensure future pipeline
  - Senior clinical support roles for new graduate and new to service staff
  - Clinical specialty midwives in secondary care/career progression for core midwives
  - Additional quality and safety midwifery role within Women's Health
  - Home grown SMOs (from non-training registrar through to Fellows)
  - Increase secondary care sonography services to meet maternity acute demand